REMARKS/ARGUMENTS

1. Amendments of the specification:

Paragraphs [0006], [0016], and [0020] are amended, as shown in the Amendments to the Specification section. In these amendments, the term "light exit surface" is mentioned; wherein both of the light exit surfaces of the LCOS panels 30 and 50 had been illustrated as numerals 34a and 56a in Figs. 2-3 already. Since paragraphs [0005]-[0006] have described about the display theory of an LCOS panel in the Description of the Prior Art section, those skilled in the art would clearly understand that the top surface or outer surface of the transparent substrate was the light exit surface or display surface of the LCOS panel. As a result, no new matter is introduced. Acceptance of the amendments of the specification is politely requested.

2. Rejections of claims 1-7, 18-23, and 31-37:

Claims 1-7, 18-23, and 31-37 are rejected under 35. U.S.C 103(a) as being unpatentable over Nakamura et al (US 6,727,967, the 967') and of Koike (US 2004/0150777, the 777') in view of Lu (US 2005/0122464, the 464). Reasons for rejection are shown on page 2-5 of the above-mentioned Office Action.

Response:

In regard to claims 1 and 18, Examiner notes that Fig. 18 of the 967' discloses a liquid crystal device 10 having a glass substrate 13, a transparent substrate 14, a liquid crystal layer 15, a plurality of color filters 72, and a backlight unit 21. The glass substrate 13 has a plurality of pixels arranged in a pixel array. The transparent substrate 14 is positioned above the glass substrate 13, and the liquid crystal 15 is positioned between the transparent substrate 14 and the glass substrate 13. The color filters 72 are positioned below the glass substrate 13. However, as shown in Fig.18 of the 967', the color filters 72

are positioned between the glass substrate 13 and the backlight unit 21, and accordingly the color filters 72 are positioned in the inner portion of the liquid crystal device 10. *It causes a disadvantage of heat accumulation. Heat is generated by the color filters 72 when the liquid crystal device 10 is operating and accumulates in the inner portion of the liquid crystal device 10 because the heat cannot be removed by an outer cooling system. Heat accumulation decreases the longevity of the element of the liquid crystal device 10.*

In addition, 967' is an application about a conventional LCD. Referring to Figs.1-4, 11-13, and 18-19, the top substrate 14 and bottom substrate 13 are both glass substrates. And the driving elements of pixels or subpixels are thin film transistors (TFTs) 31 as shown in Figs. 2 and 11 (col. 5, lines 56-58, and col.5, lines 14-20). *Accordingly, the structures disclosed by 967' are only conventional LCDs, which is much different from LCOS panels of the present application, which take MOS transistors as their driving elements of pixels.*

The display panel of the present application is a LCOS panel in which the liquid crystal layer, the transparent substrate and the micro color filters (color filters) are disposed above the **silicon substrate**. **The micro color filters** (color filters) **are positioned on a top surface of the transparent substrate, and accordingly, the micro color filters are disposed in the outer part of the LCOS panel. Heat generated by the micro color filters is easily radiated out and may be removed by an outer cooling system. Therefore, problem of heat accumulating will be solved.**

Examiner notes that a first substrate 1 of the 777' having a plurality of pixels arranged in a pixel array thereon, each of the pixels comprising a plurality of subpixels, and a plurality of micro color filters 37R, 37G, 37B, each of the micro color filters being positioned corresponding one of the subpixels (shown in Fig.11-12). However, the 777' is related to a LCD panel, not to a LCOS panel. Those skilled in the art will understand that

LCD panel and LCOS panel belong to different technical fields and their color filter sizes are in much different grades.

Examiner also notes that the 464' discloses that the use of silicon backplane (LCOS) provides the availability of high aperture ratio, high resolution, small size and highly integrated nature thereof. However, *the 464' never discloses any detail description to show the structure of a LCOS panel and never suggests positioning color filters on the outer surface or light exit surface of the transparent substrate of a LCOS panel.*

To sum up, the 967' and the 777' are related to LCD structures, but not LCOS structures. Therefore the 967' and 777' applications are contained in the LCD field, different from the LCOS field of the present application. In addition, none of the three cited prior arts teach or suggest constructing a LCOS panel having micro color filters on the top surface of the transparent substrate, or a LCOS panel having micro color filters in the outer portion thereof. MPEP 706.02(j) explains very clearly that three criteria must be met to sustain an obviousness-type rejection: (1) there must be some sort of motivation to combine the references, (2) there must be a reasonable expectation of success, and (3) all claim limitations must be met. Applicants respectfully asserts that none of these three criteria are met to sustain a 35 U.S.C. 103(a) rejection against claims 1 and 18 when combining the above mentioned cited prior arts. Therefore, claims 1 and 18 should be allowable.

Claims 2 and 19 have been amended to emphasize that the micro color filters (color filter) are positioned on the top surface of **the same transparent substrate** but opposite to the transparent conductive layer. **The micro color filters (color filter) and the transparent conductive layer are positioned on different sides of the transparent substrate**. As for the 967', both of the first color filter 50 and the transparent conductive layer 17 are disposed on the inner surface of the glass substrate 14. The relative position

of the transparent conductive layer and the micro color filters (color filters) of the present application are different from those of the 967'. **Moreover, the micro color filters (color filters) of the present application are positioned in the outer portion of the LCOS display**. Those references provided by Examiner never teach or suggested that the micro color filters (color filters) can be placed in the outer portion of the LCD or a LCOS panel. Therefore, claims 2 and 19 should be allowable.

In respect to claims 7 and 37, the size of the micro color filters of the present invention is similar to the micro color filters used on a CMOS. However, the color filters of the 777' are used on a TFT-LCD panel, thus those skilled in the art may understand that the sizes of color filters used in a TFT-LCD panel have a larger size than the micro color filters of a LCOS panel of the present application, wherein the color filters of a TFT-LCD and the micro color filters of a LCOS panel are in much different size grades. Therefore, the micro color filters of the present invention and the color filters used for the TFT-LCD panel can't be regarded as the same. Claims 7 and 37 should be allowable.

According to above, claims 1 and 18 should be allowable. Claims 2-7 and 31-32 are dependent upon claim 1, and claims 19-23 and 33-37 are dependent upon claim 18. Claims 2-7, 19-23, and 31-37 should be allowable if claims 1 and 18 are allowed. Reconsideration of claims 1-7, 18-23, and 31-37 is politely requested.

3. Rejection of claims 8-11, 13-17, 24-30, and 38-40:

Claims 8-11, 13-17, 24-30, and 38-40 are rejected under 35. U.S.C 103(a) as being unpatentable over Nakamura et al (US 6,727,967, the 967') and of Koike (US 2004/0150777, the 777') and of Lu (US 2005/0122464, the 464) in view of Nakano et al. (US435729, the 729'). Reasons for rejection are shown on page 5-7 of the above-mentioned Office Action.

Response:

The micro color filters (color filter) of the present application are made of color dyes and photosensitive materials, such as photo resist materials or photoresist resins. The color of the micro color filters are defined by the dyes added in the photosensitive material. The end product still includes photosensitive materials. However, the color filter 2 of the 729' is made of titanium oxide and silicon oxide, and is formed by methods such as the electron beam deposition method and the sputtering method. Thereafter, a photoresist 3 is formed as a mask to define the pattern of the color filter 2. After the etching process, photoresist 3 is removed. Therefore, the material of the color filter 2 never includes photoresist or photosensitive material. The materials of the micro color filters (color filter) and the composition of the end products are different from those of the color filter 2. Therefore, applicants believe claims 8, 10, 24, 26, and 38 should be allowable.

Furthermore, as claims 8-11, 13-17, 24-30, and 38-40 are dependent on claim 1 or 18 respectively, they should be allowable if claims 1 and 18 are allowed. Reconsideration of claims 8-11, 13-17, 24-30, and 38-40 is respectfully requested.

4. Rejection of claims 12:

Claims 12 are rejected under 35. U.S.C 103(a) as being unpatentable over Nakamura et al (US 6,727,967, the 967') and of Koike (US 2004/0150777, the 777') and of Lu (US 2005/0122464, the 464) and Nakano et al. (US435729, the 729') in view of Iwamatsu (US 20010004108, the 108'). Reasons for rejection are shown on page 7 of the above-mentioned Office Action.

Response:

As described in [0052], the composition of liquid crystal layer of the 108' includes coloring agent to adjust the wavelength of the light. In [0067], the 108' discloses that the

coloring agent, such as dichroic dyes, is usable. The dichroic dyes are added into the liquid crystal layer. However, claim 12 of the present invention defines that **the material of the micro color filters are dichroic films.** The 108' never suggests or teaches the color filter can be dichroic films.

Moreover, claim 12 is dependent upon claim 1, and should be allowable if claim 1 is allowed. Reconsideration of claim 12 is politely requested.

5. Introduction to new added claims 41-42:

Claims 41-42 describes top surface of the transparent substrate is a light exit surface of the display panel. The LCOS panel of the present application is built based on the silicon substrate. Those skilled in the art understand that lights reflected by the metal electrodes will pass through the liquid crystal layer to exit the LCOS panel from the top surface of the transparent substrate, and subsequently, lights exit the LCOS panel from the top surface of transparent substrate to show colors and gray scale (paragraph [0020]). Consequently, **the top surface of the transparent substrate can be certainly regarded as the light exit surface or display surface of the display panel**. Therefore the micro color filter of claim 1 or the color filters of the claim 18 is positioned on the light exit surface of the display panel. No new matter is introduced. The references provided by Examiner never show or teach that the micro color filter of the LCOS can be placed on the light exit surface of the LCOS panel. Therefore, claims 41-42 should be allowable. Acceptance and consideration of claims 41-42 are politely requested.

Applicants respectfully request that a timely Notice of Allowance be issued in this case.

Sincerely yours,

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Note: Please leave a message in my voice mail if you need to talk to me. (The time in D.C. is 12 hours behind the Taiwan time, i.e. 9 AM in D.C. = 9 PM in Taiwan.)